



SIKA AT WORK

CP-240 CONDUCTOR ANNULUS REPAIR, BRUNEI

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST



CP-240 CONDUCTOR ANNULUS REPAIR, BRUNEI



PROJECT DESCRIPTION

Between May and June 2019, Sika was engaged by Brunei Shell Petroleum Company Sdn Bhd to execute a critical repair on Well CP-240, located on the CPDP-33 platform in the Champion Field offshore Brunei. The project addressed annular pressure instability within the conductor casing, a significant integrity concern for ongoing well operations.

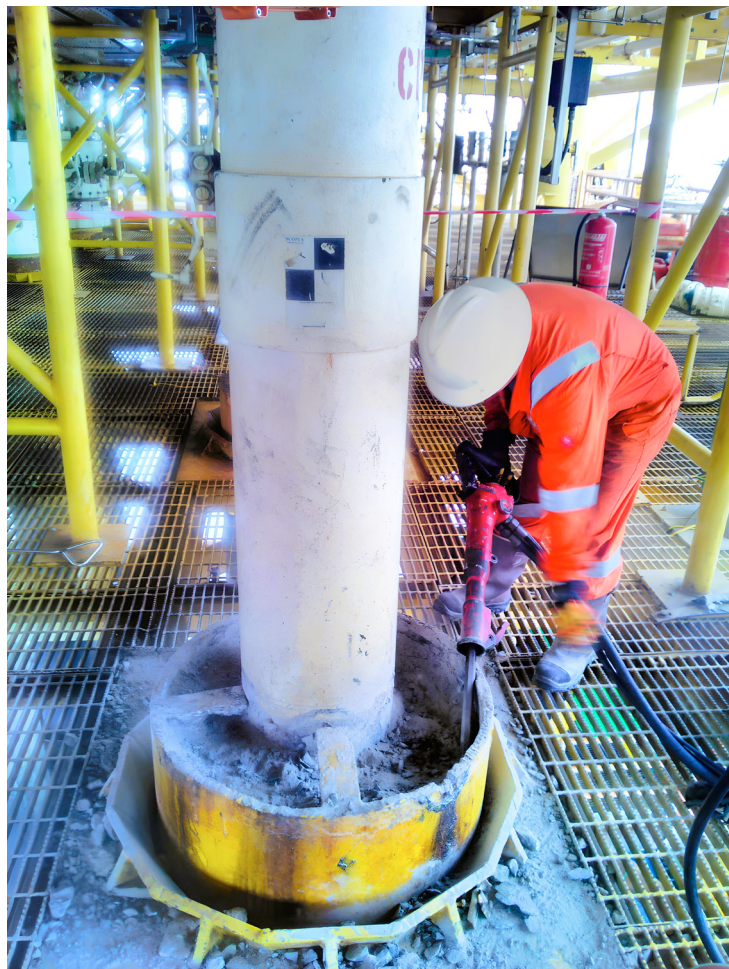
The repair required specialized materials, detailed engineering, and precise offshore execution to restore sealing capacity and structural reliability.

Project name: CP-240 Conductor Annulus Repair, Brunei
Client: Brunei Shell Petroleum Company Sdn. Bhd.
Location: Champion Field, Offshore Brunei
Year: 2019
Application: Repair and maintenance
Product: SikaGrout®-9970

PROJECT REQUIREMENTS

Inspection and testing revealed micro-annuli leakage pathways within the annular space of the 30-inch conductor, threatening pressure containment and safe well performance. Brunei Shell Petroleum required a comprehensive repair solution capable of sealing these micro-paths, reinstating pressure integrity, and ensuring the long-term stability of the well.

The solution needed to be executed at a water depth of 38.09 meters, with minimal production disruption and full adherence to offshore safety and quality standards.



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SIKA SOLUTIONS

Sika developed a complete repair methodology, beginning with the removal of old cement down to 1.2 meters from the top of the 30-inch conductor. An epoxy grout layer was then poured over the exposed area, forming a strong bond to the steel surface and serving as the primary pressure barrier to prevent micro-annuli leakage.

To further reinforce the repair, a custom-fabricated steel clamp was installed around the conductor using a chain block. The clamp was bolted tight, compressing neoprene seals to ensure a secure fit against the conductor's exterior surface.

Sika subsequently injected 1.5 metric tons of SikaGrout®-9970, an impermeable ultra-high-performance cementitious (UHPC) grout with a compressive strength of 210 MPa – similar to that of mild steel. This grout was pumped into the annular space between the conductor and casing, significantly increasing the leak path resistance by over 60% and eliminating micro-leakage channels.



The installation included primary and secondary grout inlets, with all operations performed by a team of twelve certified offshore grouting personnel working 12-hour shifts. Quality control was ensured through continuous monitoring of grout volumes, temperatures, and flow rates, as well as the casting and third-party testing of grout cubes for 28-day compressive strength verification.

Upon completion, Sika delivered a comprehensive close-out report, documenting all engineering procedures, quality records, daily progress logs, and test results, confirming the successful remediation of the annular integrity issue.

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CUSTOMER BENEFITS

Sika's integrated approach provided Brunei Shell Petroleum with a robust, permanent solution to resolve annular pressure instability in Well CP-240. The high compressive strength and impermeability of SikaGrout®-9970 ensured reliable sealing and long-term protection against micro-leakage pathways.

By combining advanced engineering design, high-performance materials, and diverless offshore techniques, Sika completed the repair efficiently, enabling the well to resume normal operations after pressure testing. The client and asset team were fully satisfied with the project's outcome, achieving all deliverables on time and to specification.

Any product name or reference reflects the Sika product name at the time of creation of this document and may differ from the product name or reference during past events.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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